

***Publications: 2000 - present***

**2000**

J. Rodriguez-Viejo, H. Mattossi, J.R. Heine, M.K. Kuno, J. Michel, M.G. Bawendi, and K.F. Jensen, "Evidence of photo-darkening and electro-darkening in (CdSe)ZnS quantum dot composites," *J. Appl. Phys.* **87**, 8526-8534 (2000).

H. Mattossi, M.F. Rubner, F. Zhou, J. Kumar, and S.K. Tripathy, and L.Y. Chiang, "Photovoltaic heterostructure devices made of sequentially adsorbed poly (phenylene vinylene) and functionalized C<sub>60</sub>," *Appl. Phys. Lett.* **77**, 1540-1542 (2000).

H. Mattossi, J.M. Mauro, E.R. Goldman, G.P. Anderson, V.C. Sundar, F.V. Mikulec and M.G. Bawendi, "Self-assembly of CdSe-ZnS quantum dot bioconjugates using an engineered recombinant protein," *J. Am. Chem. Soc.* **122**, 12142-12150 (2000).

H. Murata, H. Mattossi, C.D. Merritt, Y. Iizumi, and J. Kido, H. Tokuhisa, T. Tsutsui, and Z.H. Kafafi, "Molecular organic light-emitting diodes based on a guest-host active layer: Approaches for enhancing device performance," *Mol. Cryst. Liq. Cryst.* **353**, 567-580 (2000).

**2001**

H. Mattossi, J.M. Mauro, E.R. Goldman, T.M. Green, G.P. Anderson, V.C. Sundar and M.G. Bawendi "Bioconjugation of highly luminescent colloidal CdSe-ZnS quantum dots with an engineered two-domain recombinant protein," *Phys. Stat. Sol.(b)* **224**, 277-283 (2001).

E.R. Goldman, H. Mattossi, P.T. Tran, G.P. Anderson, and J.M. Mauro, "Bioconjugates of luminescent CdSe-ZnS quantum dots with engineered recombinant proteins: Novel self-assembled tools for biosensing," in *Semiconductor Quantum Dots*, S. Fafard, D. Huffaker, R. Leon, and R. Noetzel, Editors, Materials Research Society Proceed. **Vol. 642**, J2.8.1-J2.8.6, Pittsburgh (2001).

P. Tran, E. Goldman, H. Mattossi, G. Anderson, J. M. Mauro, "Bioconjugates of luminescent CdSe-ZnS quantum dots with an engineered two-domain protein G for use in fluoro-immunoassays," in *Nanoparticles and Nanostructured Surfaces: Novel Reporters with Biological Applications*, Catherine J. Murphy, Editor, Proceedings of SPIE **Vol. 4258**, 1-7 (2001).

**2002**

E.R. Goldman, E.D. Balighian, M.K. Kuno, S. Labrenz, P.T. Tran, G.P. Anderson, J.M. Mauro, and H. Mattossi, "Luminescent quantum dot-adaptor protein-antibody conjugates for use in fluoroimmunoassays," *Phys. Stat. Sol. (b)* **229**, 407-414 (2002).

P.T. Tran, E.R. Goldman, G.P. Anderson, J.M. Mauro, and H. Mattossi, "Use of luminescent CdSe-ZnS nanocrystal bioconjugates in quantum dot-based nanosensors," *Phys. Stat. Sol.(b)* **229**, 427-432 (2002).

E.R. Goldman, G.P. Anderson, P.T. Tran, H. Mattossi, P.T. Charles, and J. M. Mauro, "Conjugation of luminescent quantum dots with antibodies using an engineered adaptor protein provides new reagents for fluoroimmunoassays," *Analytical Chemistry* **74**, 841-847 (2002).

H. Mattossi, M.K. Kuno, E.R. Goldman, G.P. Anderson, and J.M. Mauro, "Colloidal semiconductor quantum dot conjugates in biosensing," in *Optical Biosensors: Present and Future*, F.S. Ligler and C.A. Rowe Eds, Elsevier, Amsterdam, the Netherlands, p 537-569 (2002).

P.T. Tran, E.R. Goldman, G.P. Anderson, J. Mathew Mauro, and H. Mattoussi, "Application of luminescent CdSe-ZnS quantum dot bioconjugates in nanosensors," in *Nanoscience Using Laser-Solid Interactions*, Kouichi Murakami, David B. Geohegan, and Frank Träger, Editors, SPIE Proceedings **Vol. 4636**, 23-30 (2002).

E.R. Goldman, E.D. Balighian, H. Mattoussi, M.K. Kuno, J.M. Mauro, P.T. Tran, and G.P. Anderson, "Avidin: a Natural Bridge for Quantum dot-Antibody Conjugates," *J. Am. Chem. Soc.* **124**, 6378-6382 (2002).

K.A. Higginson, M. Kuno, J.E. Bonevich, S.B. Qadri, M. Yousuf, and H. Mattoussi, "Phase and Ligand Mediated Synthesis of Colloidal  $\beta$ -HgS Quantum Dots," submitted to *J. Phys. Chem.* (2002).

M. Kuno, K.A. Higginson, J.E. Bonevich, S.B. Qadri, M. Yousuf, and H. Mattoussi, "Synthesis and Characterization of Colloidal Mercury Chalcogenide Quantum Dots," in *Optical Properties of Nanocrystals*, Zeno Gaburro Editor, SPIE Proceedings **Vol. 4808**, in press (2002).